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Solid Waste Section

June 08, 2016

Mr. Tim Rogers
Solid Waste Director
460 B South Landfill Road
Dudley, NC 28333

Re: Additional Comments on Permit Amendment Application (Permit Application)
Wayne County Landfill Facility, Wayne County, North Carolina
Permit No. 9606-MSWLF-1998, Document ID No. (DIN) 26188

Dear Mr. Rogers:

On April 05, 2016 the Division Waste Management (DWM), Solid Waste Section (SWS) received an electronic copy of the written responses to the DWM comments (DIN 25782) dated March 18, 2016 and the revised Permit Application titled as:

- *“Amendment to Permit – Municipal Solid Waste And Construction And Demolition Landfill Facilities.”* Dated January 2016 and revised April 2016. Prepared by Municipal Engineering Services Company, P.A. (MESCO) [DIN 25879].

After completing a review, the SWS has several comments on the revised Permit Application which are stated below. Your timely responses to the comments will expedite the completion of the reviewing processes.

MSWLF Unit

1. (Section 2.7, on Page 70) The MW-1 is a likely typo of the MW-1R. Please correct the typo.
2. (Drawing No. F1) Please add the following info to the drawing:
 - i. The water quality monitoring sample locations – SW-5, MW-4, & MW-15 associated with lined MSWLF are missing.
 - ii. The location of Inert Debris Storage & Process Unit in former Borrow Pit # 1 is not shown on drawing.
3. (Section 3.1, Page No. 81) The maximum inventory of waste for the MSWLF – Phases 1 through 4 should be 2,694,636 cubic yards (CY) including the in-place Phases 1 through 3 waste volume of 2,133,006 CY and the Phase 4 waste volumes of 561,630 CY.

C&DLF Unit

4. (Section 3.1, Page No. 154) The maximum inventory of waste for the C&DLF – Phases 1 through 3 should be 1,477,023 cubic yards (CY) including the in-place Phases 1 & 2 waste volume of 1,193,004 CY and the Phase 3 waste volumes of 284,019 CY.

Water Quality and Analysis Plans for 9606-MSWLF and 9601-CDLF

5. The Water Quality and Analysis Plans for BOTH facilities need to be updated with the most accurate information and sealed, signed and dated with the current date. The December 15, 2014 Water Quality and Analysis Plan previously submitted for Permit No. 9601-CDLF is sufficient and needs to be updated with only a new cover page with current date, signature and PE or PG seal. The last approved Water Quality and Analysis Plan for the lined MSWLF Permit No. 9606-MSWLF was dated April 25, 2011 and needs to be updated with current and accurate information reflecting installation of MW-14, MW-15, MW-16 and replacement groundwater monitoring well MW-16R. A new cover page with signature, PE or PG seal and date is also requested. When each of the two Plans are finalized and approved, Wayne County will submit an electronic copy of each Plan.

(For your information, in the latest August 2015 Semi-annual Water Quality Monitoring Report for 9606-MSWLF, the text is incorrect which states that twelve downgradient wells and one upgradient well for a total of 13 wells are currently being sampled whereas a total of 16 groundwater monitoring wells are actually being sampled.)

Please revise Drawing No. F1 in the Permit Amendment to include ALL groundwater monitoring and surface water monitoring points at ALL Units. There are several groundwater monitoring wells and surface water sampling points missing on Drawing No. F1 (for example surface water monitoring points SW-5 and SW by MW-2).

For the purpose of the 2016 Permit Amendment application submitted for Permit Numbers 9606-MSWLF and 9601-CDLF, Section 2.7 Appendix V – Surface and Groundwater Monitoring Plan pages 67-70 needs to be revised to either 1) include a section discussing groundwater and surface water monitoring at BOTH the lined MSWLF Permit No. 9606-MSWLF and Wayne County Closed Unlined MSWLF (Unit 1) and Active CDLF over closed unlined MSWLF Permit No. 9601-CDLF or 2) reference in the body of Section 2.7 the two separate (updated) Water Quality and Analysis Plans approved for these two permitted facilities.

Landfill Gas Monitoring Plan

6. (Drawing No. F1) The following landfill gas wells associated with unlined MSWLF units are not shown on the drawing:
 - i. The MP-1, MP-2, & MP-3 which are adjacent to the closed, unlined MSWLF – Unit 2 (which is underneath the active C&DLF unit).

- ii. The MP-8 & MP-9 which are on the southwest side of the closed, unlined MSWLF – Unit 1.
 - iii. The MP-1 (on the south side of MW-1 associated with MSWLF-Unit1) is likely the typo of MP-16 which is not available on the drawing.
 - iv. The MP-17 & MP-18 which are on the north side of the closed, unlined MSWLF – Unit 1.
 - v. According to the permit application for the C&DLF unit on top of the closed unlined MSWLF units (DIN 16793), approved on August 27, 2012, two gas wells, MP-17 & MP-18 on Drawing No. F1/Sheet No. 3 of 9 should have been installed and sampled quarterly. Please explain why these two wells were eliminated from the explosive gas monitoring plan? If the SWS approved the modification, please provide the approval documents.
7. The County submitted a revised Landfill Gas Monitoring Plan (Plan) dated March 23, 2016 DIN 26187 to request an approval of terminating explosive gas monitoring at several gas wells. After completing a review of the revised Plan, the SWS determines that the following gas wells may be eliminated from the site-wide Landfill Gas Monitoring Plan. The SWS decision is based on the coverage of the site-wide gas monitoring plan and the continued operation of the landfill gas control and collection system.
- i. The gas wells - MP-14, MP-15, MP-16, MP-17, & MP-18 associated with the closed unlined MSWLF – Unit 1 can be eliminated from the program. The figure illustrating methane monitoring points for the closed MSWLF is located in the last approved LFG Monitoring Plan for this facility which is located in the May 2012 Permit Application for Phases 1 & 2 for the Wayne County CDLF, specifically located in *Section 1.4 Explosive Gas Control Plan*, and approved August 27, 2012 (DIN 16993). Please state in the Landfill Gas Monitoring Plan that hydrogen sulfide will be monitored at all methane monitoring points at this facility in addition to methane. For further clarification, the landfill gas monitoring points that will be monitored quarterly at 9601-CDLF include the following:
MP-1, MP-2, MP-3, MP-4, MP-5, MP-6, MP-7, MP-8, MP-9, MP-10, MP-11, MP-12 and MP-13 for a total of 13 landfill gas monitoring points.
 - ii. The gas wells - MP-24 and MP-25 associated with the lined MSWLF – Unit 3 can be eliminated from the program. The figure the SWS is basing this decision on is located in the last approved Landfill Gas Monitoring Plan for the active MSWLF dated April 12, 2011 and was included in Appendix E of the Design Hydrogeologic Study for the Wayne County Subtitle D, Phase 3 (DIN 18849).

For further clarification, the landfill gas monitoring points that will be monitored quarterly at 9606-MSWLF include the following: MP-17, MP-18, MP-19, MP-20, MP-21, MP-26, MP-27, MP-28, MP-29, and MP-30 for a total of 10 landfill gas monitoring points.


The SWS denies the County's requests to remove other gas wells from the existing explosive gas monitoring program (Program). The reasons to deny the requests are stated below:

- i. The rule-required explosive gas detection program is to ensure that waste operations shall not endanger the human health/life and environment. No detection of methane or other gas in a gas well is not cause to eliminate the gas well from the detection program. Methane monitoring points and quarterly monitoring will remain as requested; the activities shall extend to the 30-yr (at least) post-closure period.
- ii. Accessibility (difficult geological terrains) and other concerns (snakes and tick-infested area) mentioned in the request document are not sufficiently supported reasons to eliminate samplings as these areas are part of the waste operations / activities.
- iii. The gas wells – MP-2, MP-3, & MP-8 aligned with State Route 1129 shall not be eliminated from the program because they are serve to protect the lives of the general public who use the road in a daily basis.
- iv. The gas well MP-1 shall not be eliminated from the program because the well will provide the warning sign of gas migration toward the office/shop areas. Again, it serves the purpose to protect the lives of the landfill employees, contractors, and the general public who use the landfill facilities.

The County shall revise the Landfill Gas Monitoring Plan dated March 23, 2016 which incorporates the SWS decisions and submit an electronic version of the final approved Landfill Gas Monitoring Plan.

Wayne County should submit the SWS a hard copy and one electronic copy of the response to each above-mentioned comment and the revised Permit Application, the revised Water Quality and Analysis Plans for both the Permit No. 9606-MSWLF and 9601-CDLF facilities, the combined Landfill Gas Monitoring Plan. If you have any questions please contact Ming Chao at 919-707-8251 ming.chao@ncdenr.gov or Christine Ritter at 919-707-8254 Christine.ritter@ncdenr.gov.

Sincerely,



Ming-Tai Chao, P.E.
Environmental Engineer



Christine Ritter
Hydrogeologist

Division of Waste Management
NCDEQ

cc:

Wayne Sullivan, MESCO
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Central File

